Name: KEY   **Id#**

ICS 103, Term 083

Computer Programming in C
Quiz# 1

Date: Tuesday, July 21, 2009

Q1. Fill the blank in each of the following:

(1) <u>Random Access Memory (RAM)</u> is volatile memory that can be accessed in any order (as opposed to sequential access memory).

(2) <u>Read Only Memory (ROM)</u> is non-volatile memory that cannot be written to.

(3) Examples of secondary memory include <u>hard disk</u> and <u>CD</u>.

(4) <u>Central Processing Unit (CPU)</u> coordinates all computer operations and performs arithmetic and logical operations on data.

(5) <u>Operating System</u> controls the interaction between machine and user.

(6) <u>Compiler</u> translates high-level programs to machine code.

(7) <u>Linker</u> turns the Object File into an Executable.

(8) Advantages of programming in high level languages include <u>portability</u> and <u>ease of development and maintenance</u>.

(9) Advantages of programming in assembly language include <u>accessibility to hardware resources</u> and <u>space and time efficiency</u>.

(10) Software development is based on the following steps: <u>specify problem requirements</u>, <u>analyze the problem</u>, <u>design the algorithm to solve the problem</u>, <u>implement the algorithm</u>, <u>test and verify the completed program</u>, <u>maintain and update the program</u>.

(11) Algorithm is <u>a list of steps for solving a problem</u>.

(12) The benefit of pseudo code is <u>that it enables the programmer to concentrate on the algorithms without worrying about all the syntactic details of a particular programming language.</u>

(13) The # include<stdio.h> directive is used to <u>include the file stdio.h into your source file before compilation which includes definitions of functions in the stdio library.</u>

(14) The #define M 5 directive instructs the preprocessor to <u>replace each occurrence of M in the program by 5 before compilation.</u>

(15) In C language, the data type <u>int</u> is used for representing integer numbers, the data type <u>float or double</u> is used for representing real numbers and the data type <u>char</u> is used for representing characters.

(16) The expression 4+6/2+3 evaluates to <u>10</u>.

(17) The expression (double) 6/4 evaluates to <u>1.5</u>.

(18) The expression 8.0*10/4*5-1 evaluates to <u>99.0</u>.

(19) The expression 8.0 +10/4*5-1 evaluates to <u>17.0</u>.

(20) The expression 35%15%2 evaluates to <u>1</u>.

Q2. Show the output of the following program in the space provided below it. Each square corresponds to one space.

```c
#include <stdio.h>
int main(void) {
    int i=-956;
    double j=99.517;
    printf("%7.0f %10.2f\n",j,j);
    printf("%3d %6d",i,i);
    return 0;
}
```

			1	0	0					9	9	.	5	2			
−	9	5	6			−	9	5	6								